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**REMARKS**

Claims 1-20 are pending in the above application. Claims 1,5-12, 19 and 20 were rejected under 35 USC 103(a) as being unpatentable over Sussman et al (Pub No. US 2003/0088174 A1) and in further view of Macovski et al (IEEE Transactions on Medical Imaging Vol. MI-2 No. 3, Sept 1983). Claims 13-18 were rejected under 35 USC 103(a) as being unpatentable over Sussman et al, in view of Macovski, in further view of Lampotang et al (US 6,597,939). Claims 2-4 were objected to as being dependent on a rejected claim but were stated to be allowable if rewritten in independent form.

**Objections**

Claims 2-4 were objected to as being dependent on a rejected claim but were stated to be allowable if rewritten in independent form. Claim 2 was rewritten in independent form incorporating all the limitations of the underlying base claim. Claims 3 and 4 were amended to be dependent on Claim 2 as rewritten. The Applicant, therefore, submits that claims 2-4 are allowable as amended.

**Claims 1,5-12, 19 and 20 rejected under 35 USC 103(a)**

Claims 1,5-12, 19 and 20 were rejected under 35 USC 103(a) as being unpatentable over Sussman et al (Pub No. US 2003/0088174 A1) and in further view of Macovski et al (IEEE Transactions on Medical Imaging Vol. MI-2 No. 3, Sept 1983). The office action asserts that Sussman teaches a method to receive a real time image from a medical imaging system; to calculate signal to noise ration based upon said real time image, and communication through the use of a media device. The office action admits that Sussman does not teach relative SNR variant based upon an acquired signal to noise ration. The Office action asserts that Macovski et al teaches a relative SNR variant based on acquired signal-to-noise ratios, and that it would have been obvious for one skilled in the art to combine Macovski with the teachings of Sussman to arrive at the present invention.

The Applicant respectfully traverses the Examiner's rejections and requests reconsideration in light of the forgoing arguments. The Examiner's assertion that Page 1, Column 2, lines 4-18 of the Sussman reference teaches calculation of signal-to-noise ration base upon a real time image. The Sussman reference does not in fact teach the calculation of signal-to-noise ratios base on real-time images. The Sussman reference teaches the use of motion compensation (i.e. real-time monitoring and adjustment of the OBJECT SIGNAL in

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spatial terms) not the measuring of real time signal to noise. The Sussman reference does not in fact even teach the measurement of noise or a ration of signal to noise. The only reference to SNR (signal to noise ration) is the brief mention (in the cited paragraph) of how averaging techniques are used to produce high SNR images. The fact that images may or may not have a high SNR bears no relationship on the teaching of real-time monitoring of SNR during operation. Similarly, the Macovski reference does nothing more that teach that the term SNR variant is known in the calculation of SNR. The present invention, however, is not attempting to claim a well known equation, but rather claims calculating a relative SNR variant base on a real-time calculated SNR and communicating it to a media device, such as video (claim 9) or audio schemes (10-20). This is not taught by Sussman or Macovski either alone or in combination. Neither reference discusses calculation of real time SNR; neither reference teaches the calculation of relative SNR variant from a real-time SNR; and neither reference either alone or in combination teaches the use of communicated such information in real time from a media device such as an audio scheme. Therefore, the Applicant submits that the rejection of the aforementioned claims based on the Sussman and Macovski reference is improper and should be withdrawn.

**Claims 13-18 were rejected under 35 USC 103(a)**

Claims 13-18 were rejected under 35 USC 103(a) as being unpatentable over Sussman et al, in view of Macovski, in further view of Lampotang et al (US 6,597,939). The office action has tacked on Lampotang (a communication system with an audio feedback device) to the aforementioned rejection.

The Applicant respectfully traverses this rejection and requests reconsideration in light of the following arguments. The Applicant respectfully incorporates by reference all of the previously laid out arguments regarding the impropriety of the previous rejections based on Sussman and Macovski as they are equally applicable herein. The Applicant further notes that not only do the underlying Sussman and Macovski reference fail to teach the limitations of the present invention, a proper foundation for motivation to combine was not laid. The Applicant notes that while audio tones have been use in the medical field to convey the physiological state of the patient (Lampotang), no reference has been provided wherein they are utilized to reflect real-time changes in the SNR of the real-time medical imaging. This is a novel element as the movement of various tools and instruments in a surgical environment may effect real-time SNR and would thus-far be difficult to determine (effect on SNR wise)

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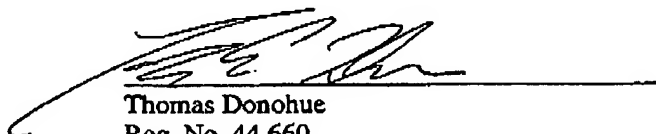
using present systems. The present system allows a real-time indication to clinicians of any SNR degradation (or improvement) during operational procedures. Therefore, by way of example, if during an operation an additional patient monitor is brought in the room, if such a monitor negatively impacts the imaging SNR the doctor will be informed immediately and can attribute the negative impact to the arriving monitor. This allows the clinician to immediately advise the removal or distancing of the interfering machine. None of the cited references either alone or in combination recites either the limitations of the present claims or the benefits they provide. Therefore, the Applicant respectfully requests removal of the rejections of the present claims. The Applicant submits that the rejection of the aforementioned claims based on the Sussman, Macovski and Lampotang references is improper and should be withdrawn.

#### CONCLUSION

The Applicant would like to thank the Examiner for his assistance. In light of the above amendments and remarks, Applicant submits that all objections and rejections are now overcome. Applicant has added no new material to the application by these amendments. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited.

Should the Examiner have any questions or comments that would place the application in better condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



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